# A beginner's guide to Office Scripts

## ICAEW Excel Community

## 26 November 2024

# Agenda

**#1** What are Office Scripts?

**#2** Creating Office Scripts

**#3** Office Scripts with Power Automate

**#4** Q&A

# The elephant in the room.....

Office Scripts will not replace VBA

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# What are Office Scripts?

- ***Office Scripts are a programming language to automate common tasks in Excel.***

- ***Designed to empower people who may not consider themselves programmers to create small programs in Excel.***

# Sounds just like VBA!

# What are Office Scripts?

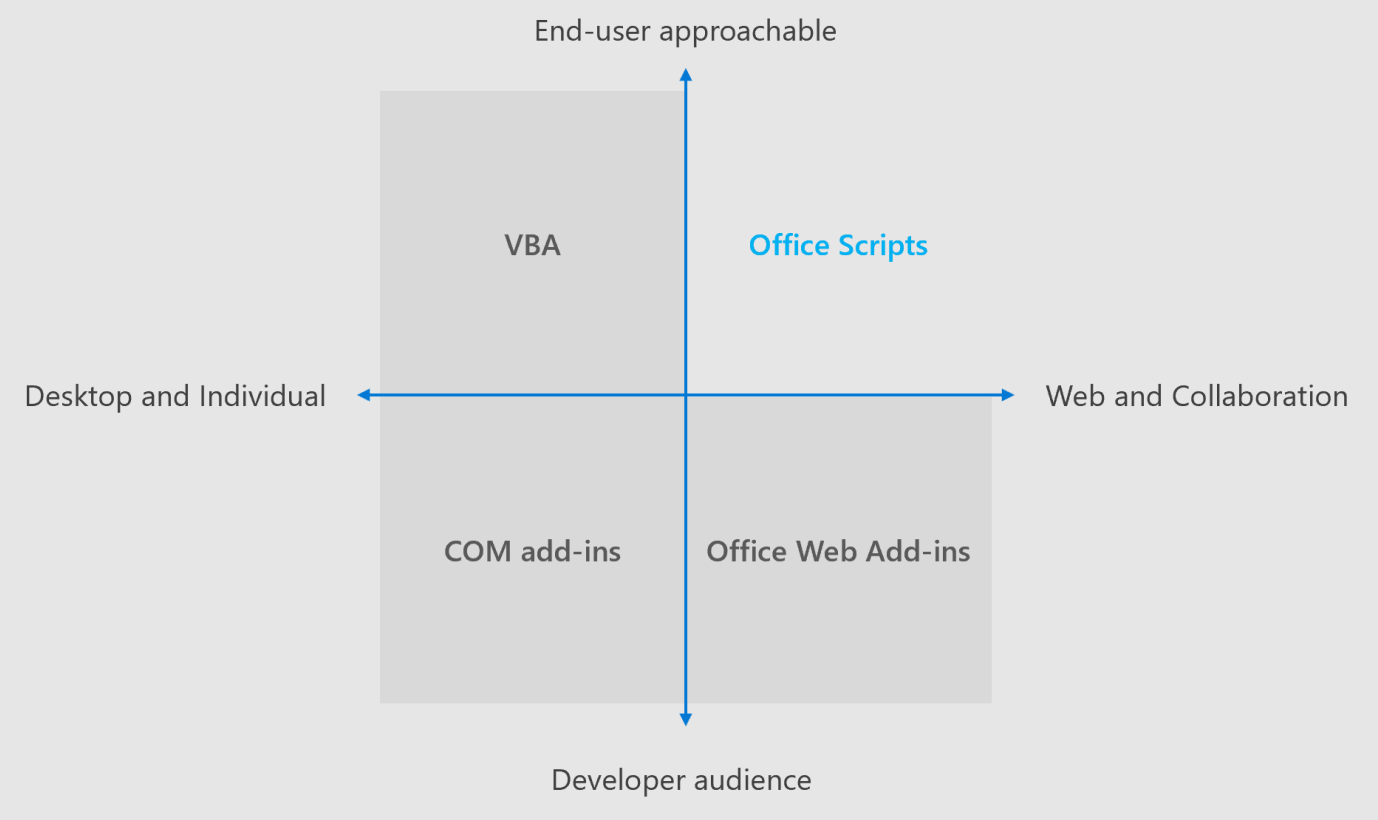
## Office Scripts are a combination of:

1. **Excel Document Object Model (Office Scripts API)**
   - Map of where to find objects in Excel

2. **TypeScript**
   - Developed by Microsoft as a derivative of JavaScript
   - Provides the language syntax for functions, arrays, logic, loops etc.
   - Primarily web-based language; some elements removed where not relevant or for security

# Sounds just like VBA!

# Difference between Office Scripts & VBA




- Workbook scope
- Designed with security
- Always on
- Always up-to-date
- Works with Power Automate

Source: https://docs.microsoft.com/en-us/office/dev/scripts/resources/vba-differences

# Difference between Office Scripts & VBA

**Local**

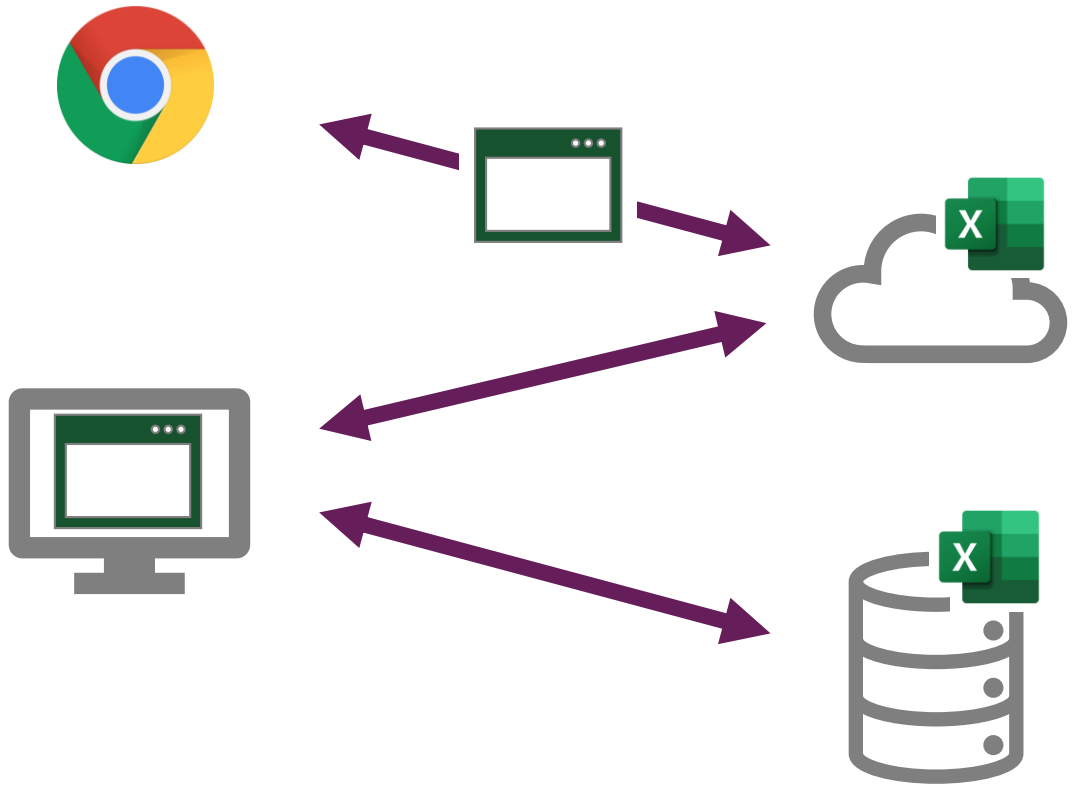
**Similar purpose.**
**Different context.**

**Global/Cloud**

Microsoft® Visual Basic® for Applications

Power Automate + Office Scripts

# What is “Cloud” in the context of Excel?



1. Excel online is a separate browser-based application which uses the Cloud.

2. Excel 365 desktop is a PC installed application which uses the Cloud.

3. Various features rely on the cloud:
   - OneDrive / SharePoint
   - Office Scripts
   - Python
   - Copilot
   - Analyze data

# Do you have access to Office Scripts?

## Compatible licences (as at Nov 2024):

### Business & Education:

365 Business | Business Premium

365 ProPlus | ProPlus for Devices

365 A3 | A5

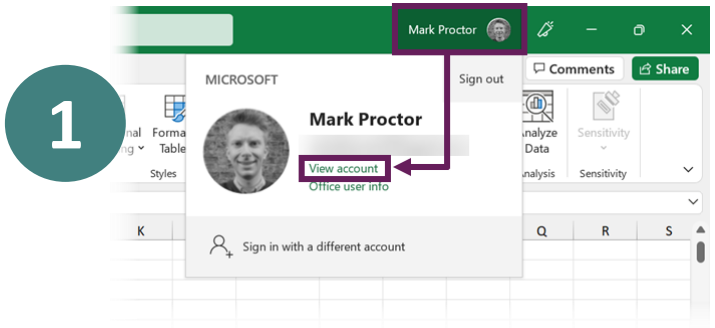
365 E1 | E3 | E5

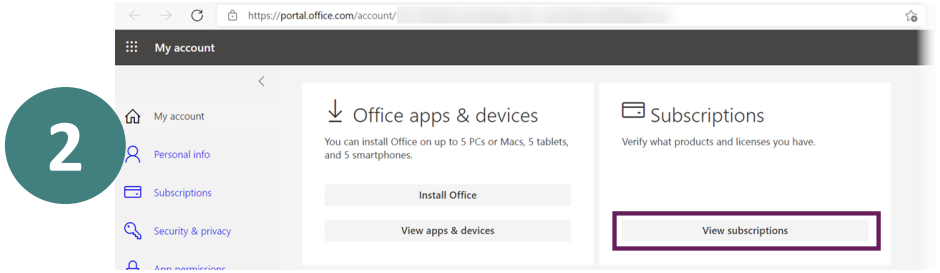
365 F3

### Personal & Family:

Various 365 versions:

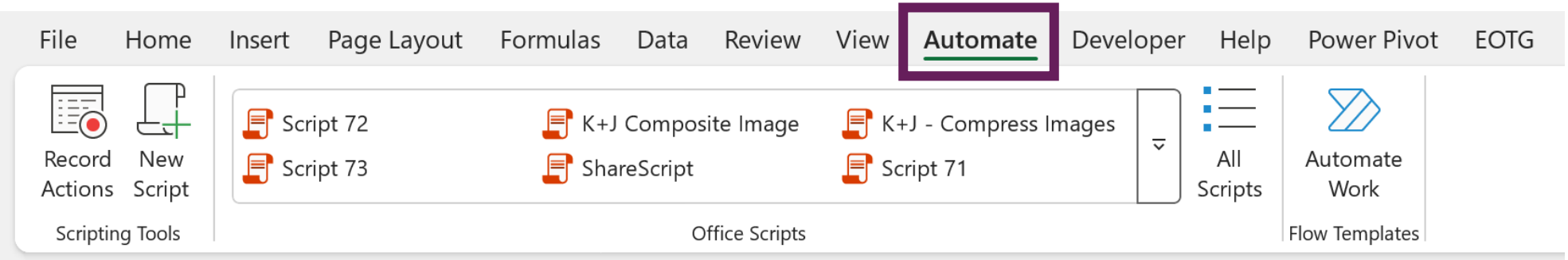
Currently in preview. Insiders only.



# Are Office Scripts enabled?

Is the **Automate** ribbon visible?

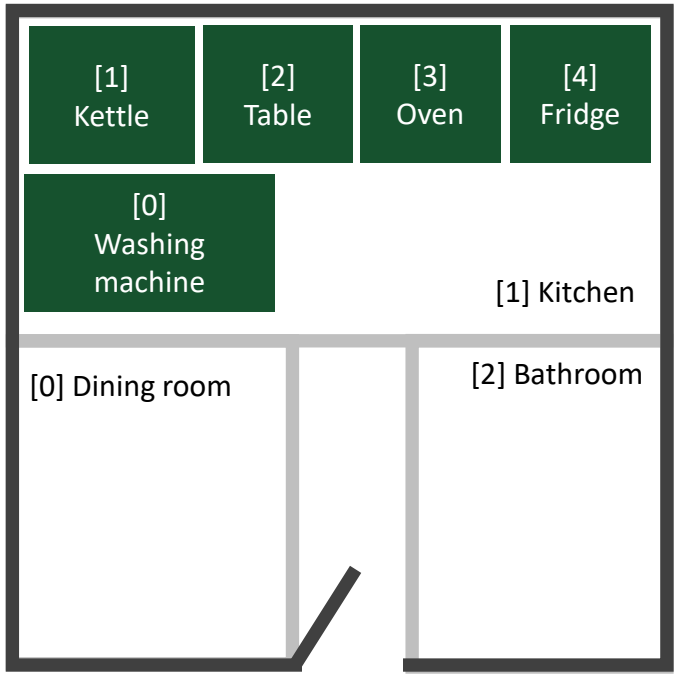



You're good to go

Enabled by default.
Turned off by your IT department.
Start begging....

# Demo

# What is the Document Object Model (DOM)?

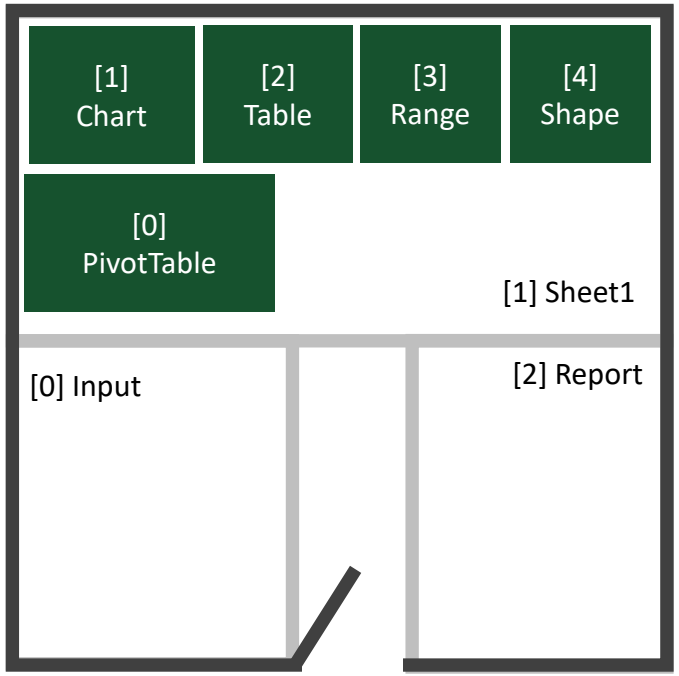



**House**

- House
- Go To Room called "Kitchen"
- Go To Item called "Oven"
- Set Temperature to 180°C

```
House.Room("Kitchen").Item("Oven").TemperatureC(180)
```

# What is the Document Object Model (DOM)?




**Workbook**

- **Workbook**
- **Get Worksheet called "Sheet1"**
- **Get Range called "A1"**
- **Set Value to "Hello World!"**

```
workbook.getWorksheet("Sheet1").getRange("A1").setValue("Hello World!")
```

**Excel**

# Demos

**#1** New script

**#2** Longer script with variables

**#3** Script recorder

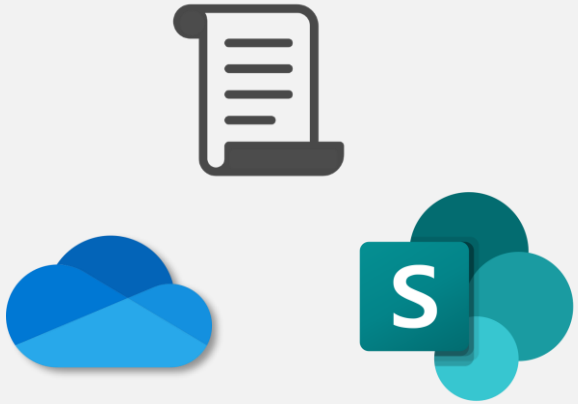
**#4** Record individual steps

**#5** Logic

**#6** Buttons

**#7** Scripts with parameters

# Saving & sharing



Access granted by existing OneDrive/SharePoint access.

Grant read or write access.

Access to Excel workbook gives access to run the script.

Script sharing not permitted outside organization.

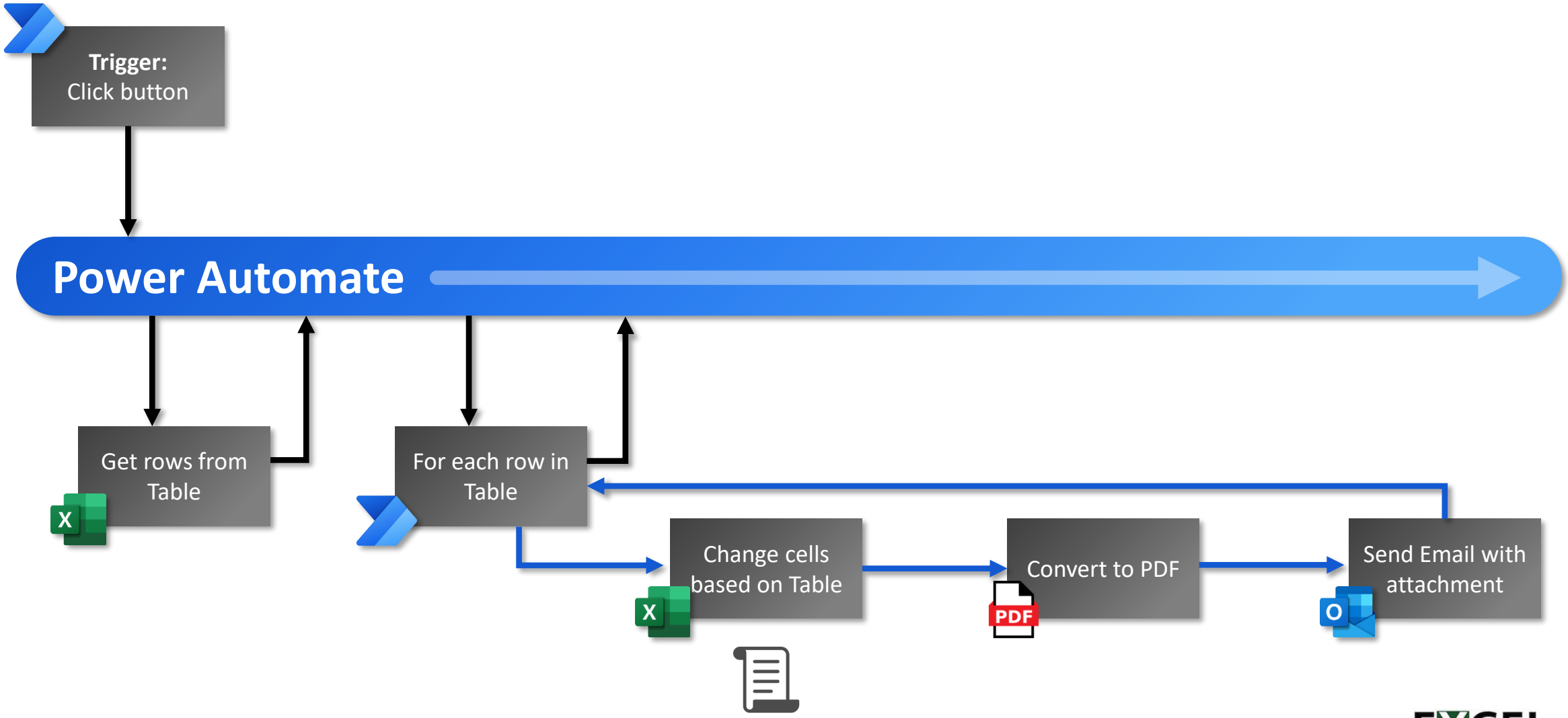
# What is Power Automate?

**Power Automate is a service that helps us create automated workflows between apps and services to synchronize files, get notifications, collect data, and more.**

**Online:** Cloud based using connectors/APIs to other applications. **Can use Office Scripts**

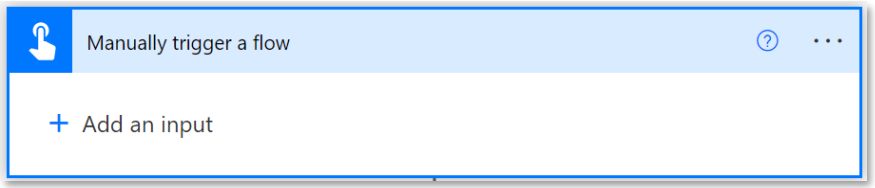
**Desktop:** Locally saved files and desktop applications. **Cannot use Office Scripts**

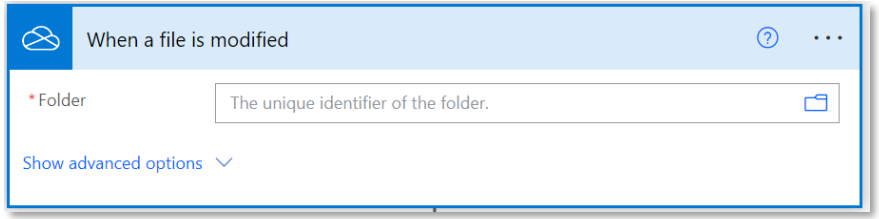
# Power Automate + Office Scripts

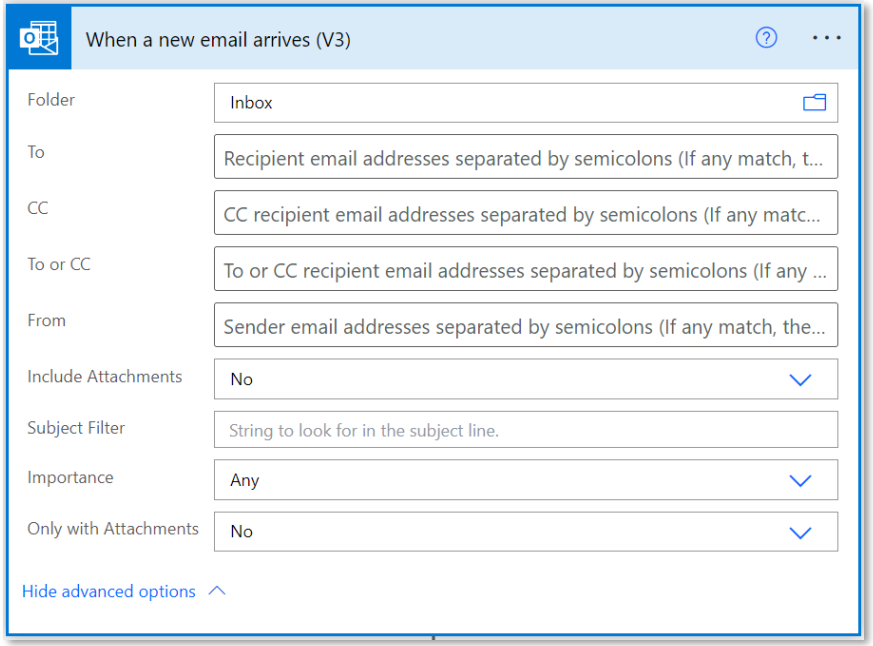


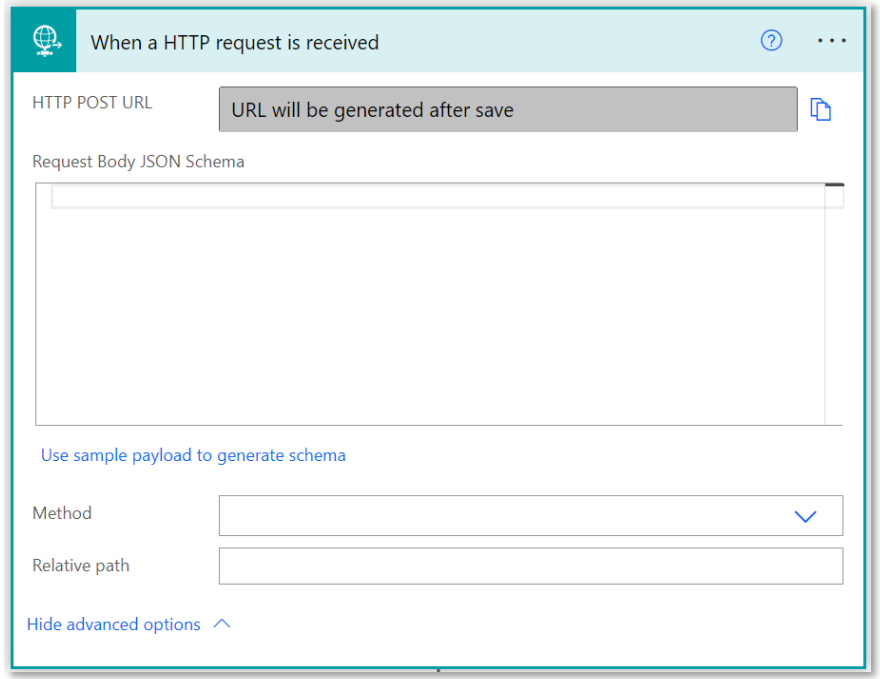
# Demo

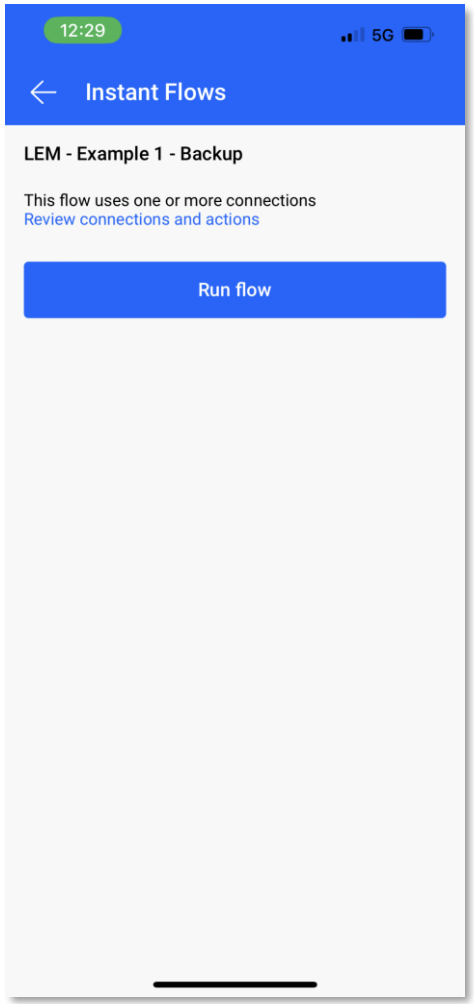
# Triggers


Manually trigger a flow
+ Add an input

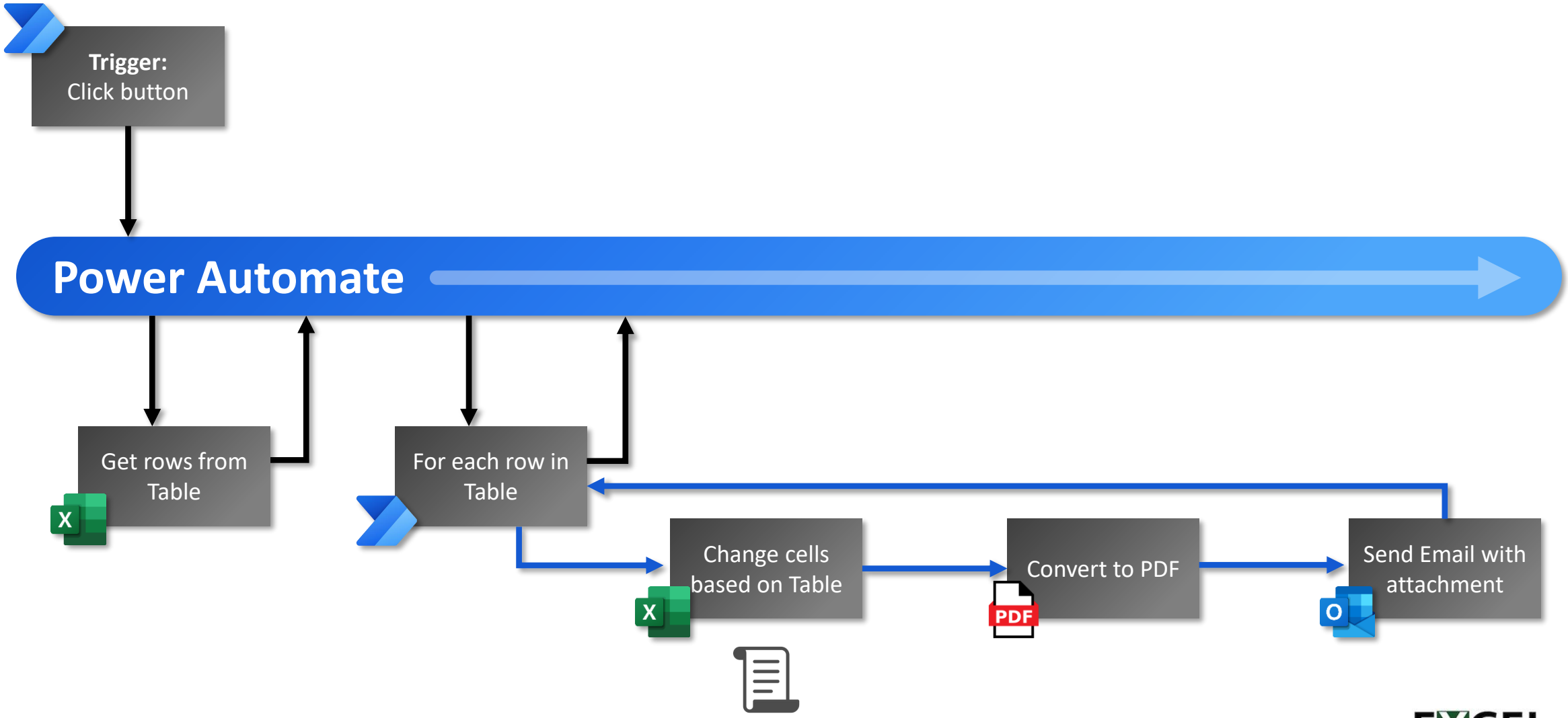

When a file is modified
* Folder
The unique identifier of the folder.
Show advanced options


When a new email arrives (V3)
Folder
Inbox
To
Recipient email addresses separated by semicolons (If any match, t...
CC
CC recipient email addresses separated by semicolons (If any matc...
To or CC
To or CC recipient email addresses separated by semicolons (If any ...
From
Sender email addresses separated by semicolons (If any match, the...
Include Attachments
No
Subject Filter
String to look for in the subject line.
Importance
Any
Only with Attachments
No
Hide advanced options

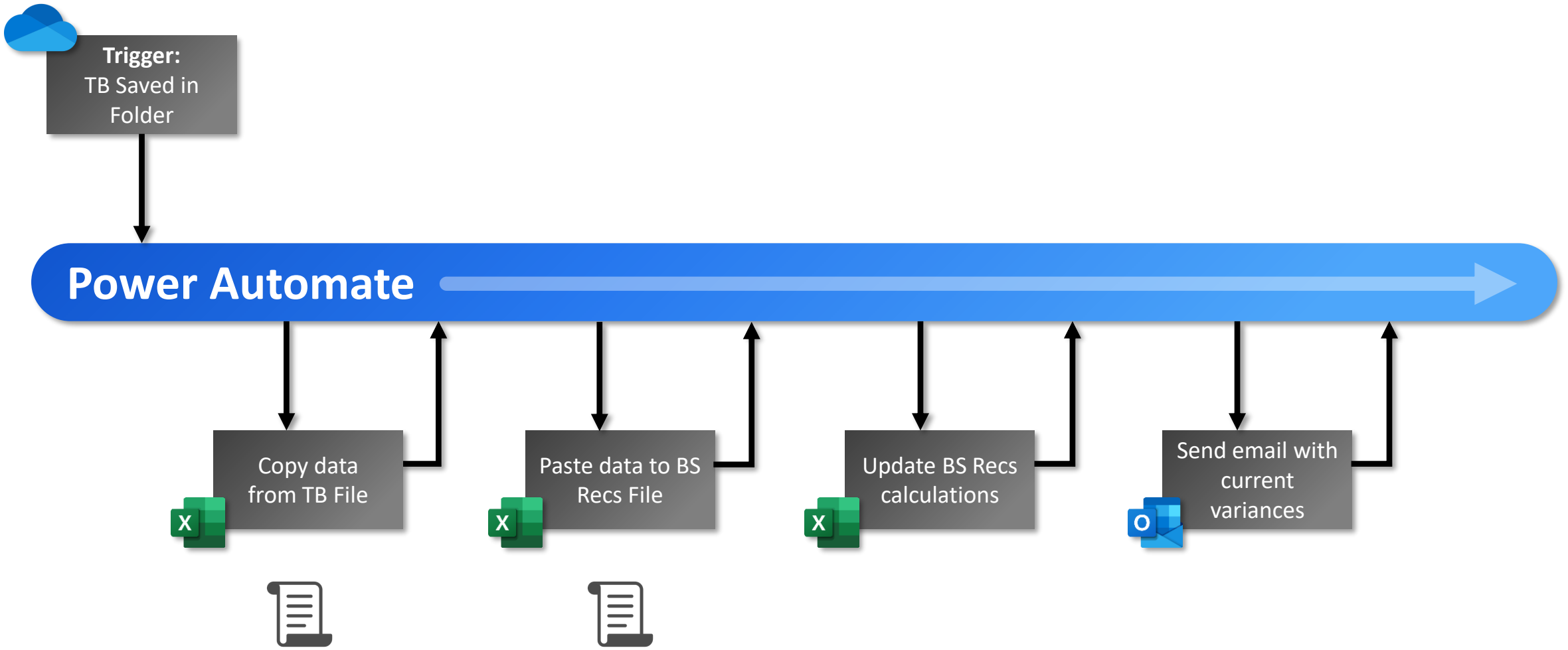

When a HTTP request is received
HTTP POST URL
URL will be generated after save
Request Body JSON Schema
Use sample payload to generate schema
Method
Relative path
Hide advanced options


12:29
5G
Instant Flows
LEM - Example 1 - Backup
This flow uses one or more connections
Review connections and actions
Run flow

# Power Automate + Office Scripts



# Overview use cases for Finance



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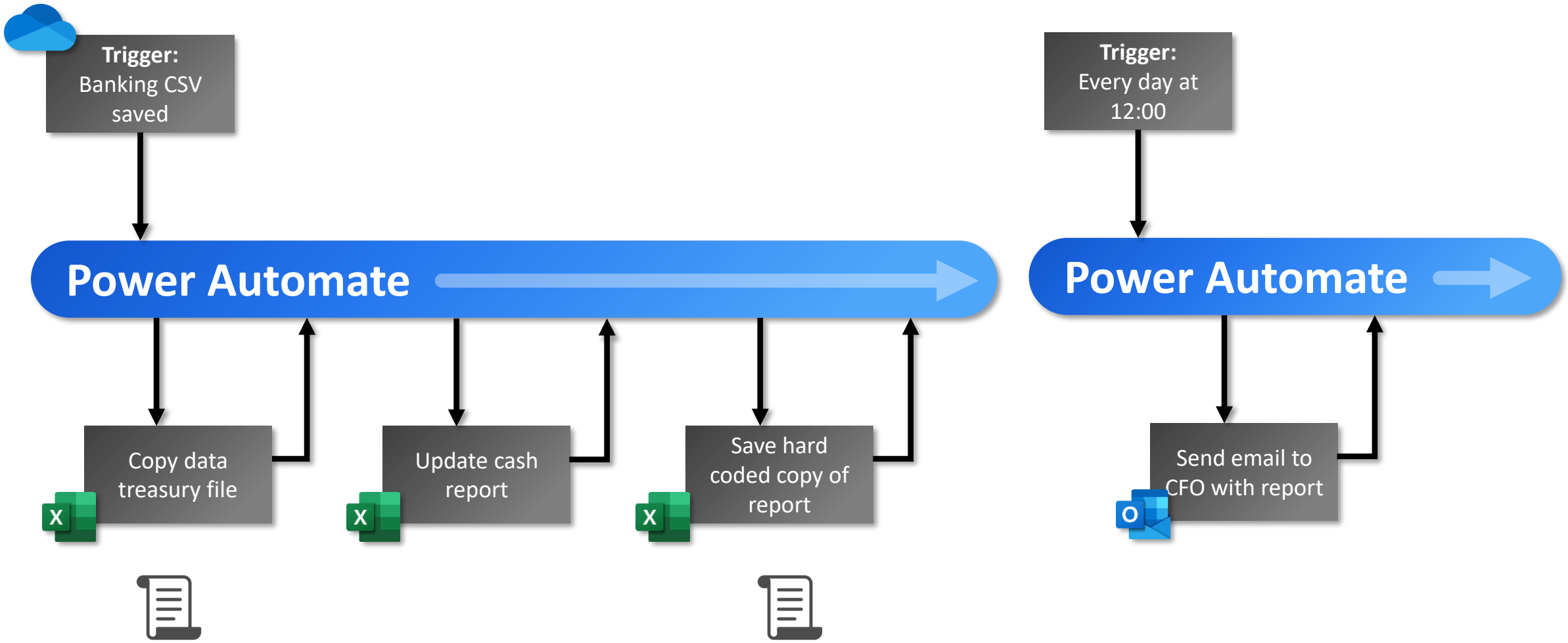

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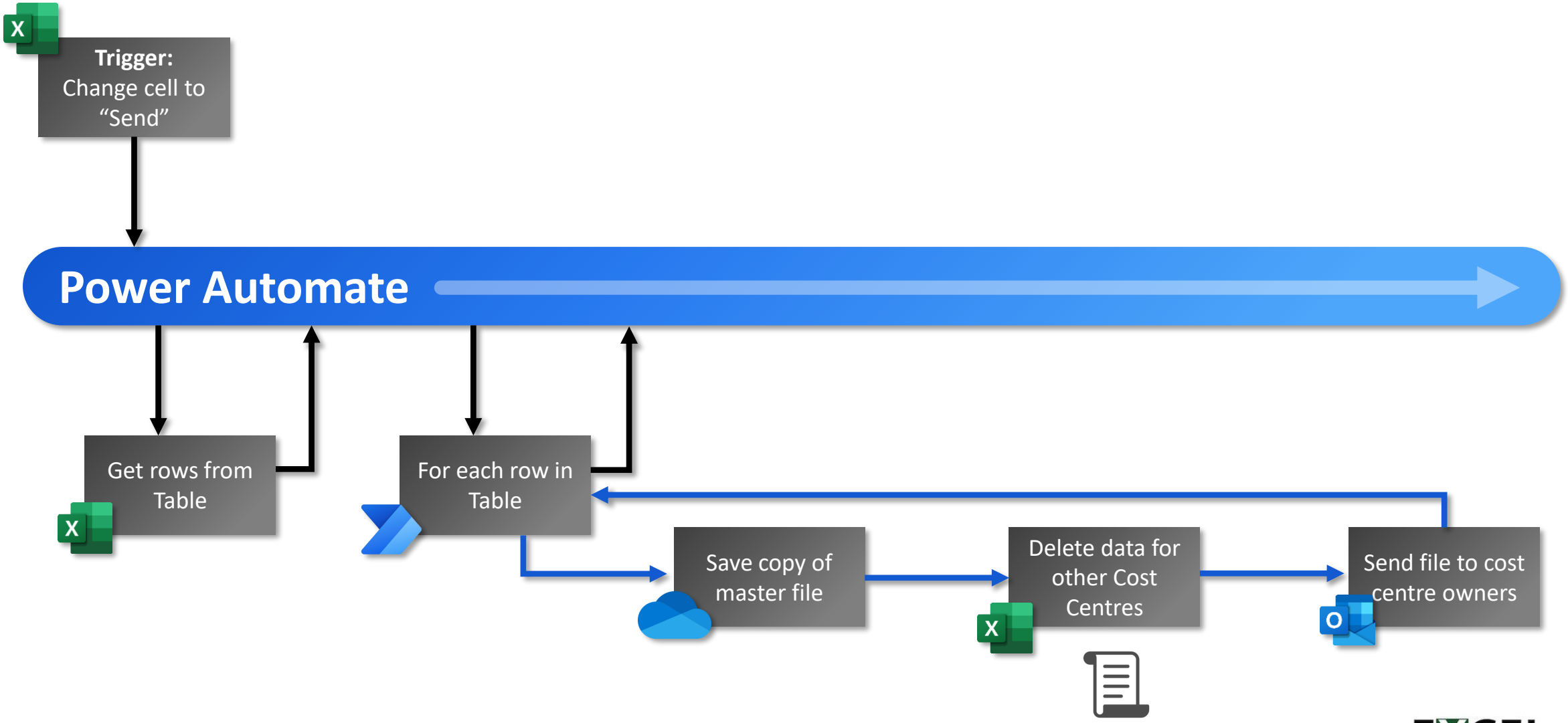

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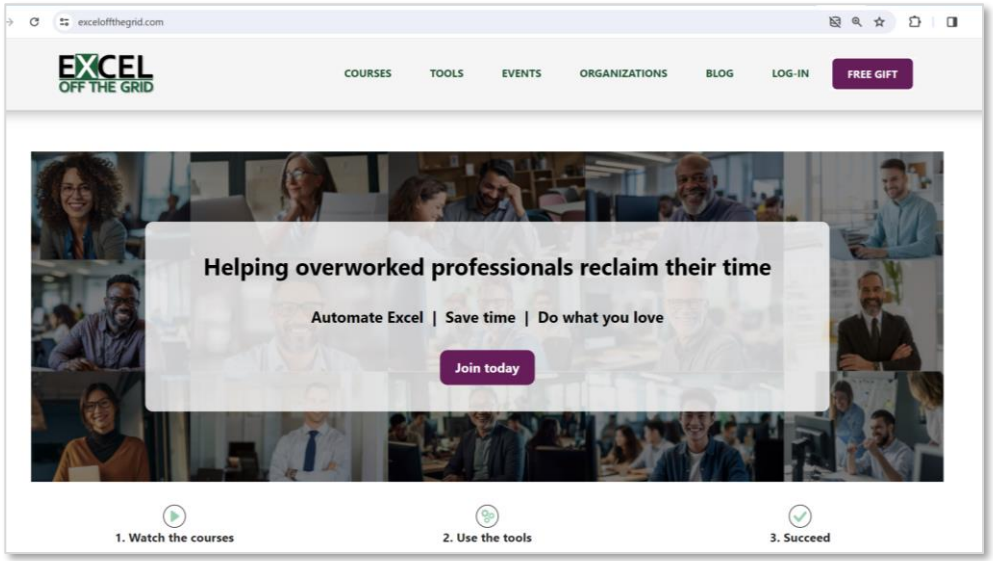
# Where to find me?

## Mark Proctor

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Mark Proctor

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# Q&A